

CLAIMS

1. A method comprising:
 - identifying multimedia elements having a linear time-code number;
 - adding a prefix value to linear time-code numbers of each identified multimedia element; and
 - adding suffix values to the linear time-code numbers of each identified multimedia element.
2. The method of claim 1 wherein the multimedia elements comprise audio video elements and interspersed elements.
3. The method of claim 1 wherein the prefix value comprises a title value.
4. The method of claim 1 wherein the suffix values comprise language value, angle value, and parental block value.
5. The method of claim 1 wherein linear time-code numbers with prefix and suffix values are resident in a time map table that associates the multimedia elements to linear time-code numbers.
6. The method of claim 5 wherein the time map is used by a DVD player to point to particular sectors on a DVD disc containing content representing the multimedia elements.

1 7. The method of claim 5 wherein the time map table is part of a file
2 that provides pointers to data structures in a medium.

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4 8. A DVD player that implements the method of claim 7, and wherein
5 the medium is a DVD disc.

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7 9. A broadcast point that performs the method of claim 1.

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9 10. A multimedia device that performs the method of claim 1.

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11 11. The method of claim 1 further comprising identifying elements
12 without a linear time-code number, and adding a linear time-code to the identified
13 elements without a linear time-code.

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15 12. The method of claim 11 wherein the elements are interspersed
16 between audio video elements that have linear time-code numbers.

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18 13. A method comprising:
19 identifying a title value describing a particular multimedia presentation
20 content comprised of multimedia elements described by extended time-code
21 numbers; and
22 searching for particular multimedia elements based on their extended time-
23 code numbers.

1 14. The method of claim 13 wherein the extended time-code numbers
2 comprise a prefix and suffixes.

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4 15. The method of claim 13 wherein the searching is performed based
5 on the prefix and on one or more of the suffixes.

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7 16. The method of claim 13 wherein the suffixes comprise angle,
8 language, and parental block.

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10 17. The method of claim 13 wherein the searching is performed based
11 on a time map table that associates multimedia elements with extended time-code
12 numbers.

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14 18. A DVD player that implements the method of claim 17.

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16 19. A personal video recorder that implements the method of claim 17.

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18 20. The method of claim 17 wherein the time map table is part of an
19 information file that provides navigation and presentation information for titles in
20 a medium.

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22 21. A DVD player that implements the method of claim 20, wherein the
23 medium is a DVD disc.

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25 22. A personal video recorder that implements the method of claim 20.

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2 23. A multimedia device that performs the method of claim 13.

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4 24. A multimedia player that performs the method of claim 13.

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6 25. A method comprising:
7 receiving multimedia elements with a linear time-code;
8 receiving multimedia elements without a linear time-code;
9 attaching linear time-codes; and
10 synchronizing all multimedia elements based the unique linear time-codes.

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12 26. A broadcast point that performs the method of claim 23.

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14 27. A multimedia device that performs the method of claim 23.

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16 28. A multimedia player that performs that method of claim 23.

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18 29. A method comprising:
19 extending an information file in a DVD to provide added functionality in
20 describing content stored on the DVD, and
21 providing navigation and presentation information from the information file
22 for playback of various titles.

1 30. The method of claim 29 wherein the extending the information file is
2 performed by extended time-code numbers that describe sequencing of the
3 content.

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5 31. The method of claim 29 wherein the extending the information files
6 adds a time map table that describes sequencing of the content.

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8 32. The method of claim 29 wherein the extending the information files
9 is performed by receiving information describing the added functionality from a
10 separate source from the DVD.

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12 33. A multimedia device comprising:
13 a processor;
14 a multimedia storage module executable on the processor and configured to
15 store multimedia presentation content comprising of multimedia elements; and
16 an extended time-code number module executable on the processor
17 configured to append extended time-code numbers to multimedia element without
18 a time-code number.

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20 34. The multimedia device of 33 further comprising a multimedia player
21 module executable on the processor and configured to play the audio/video
22 element and interspersed elements.

1 35. The multimedia device of claim 33 wherein the multimedia player is
2 configured to search for audio/video element and interspersed elements based on
3 extended time-code numbers.
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5 36. The multimedia device of claim 33 further comprising a multimedia
6 player.
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8 37. The multimedia device of claim 33 wherein the multimedia device is
9 a DVD player.
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11 38. The multimedia device of claim 33 wherein the multimedia device is
12 a personal video recorder.
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14 39. A computer-readable medium having stored thereon a data-structure
15 comprising:
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16 a first data field containing a title value;

17 a second data field containing a time-code value; and

18 a third data field containing a suffix value.
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20 40. A system comprising:

21 a broadcast point providing multimedia elements; and

22 a multimedia device that receives the multimedia elements, wherein the
23 multimedia device further receives extended time-code numbers associated with
24 each multimedia element.
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1 41. The system of claim 40 wherein the extended time-code numbers are
2 provided by the broadcast point.

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4 42. The system of claim 40 wherein the extended time-code numbers are
5 provided by a web site.
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